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PRE-APPEAL BRIEF REQUEST FOR REVIEWDocket Number (Optional)
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on May 3, 2006

Signature



Typed or printed

name Jennifer GainesApplication Number
09/692,748Filed
October 19, 2000First Named Inventor
M. Chapman Findlay IIIArt Unit
3628Examiner
Nguyen, Nga B.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

- ☒
- attorney or agent of record.

Registration number 41,338

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- attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____



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May 3, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.

Submit multiple forms if more than one signature is required, see below".

- ☐
- *Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO, to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Appellants' Pre-Appeal Conference Remarks

Claims 1-35 are pending in the application, with claims 1, 31 and 32 being the independent claims. All claims stand rejected under 35 USC § 103(a) over U.S. Patent 6,681,211 (Gatto).

The present invention concerns improved techniques for forecasting the direction in which the price of an asset (e.g., a share of stock) will move. The following is a general description of the invention. Initially, a set of exogenous variables (e.g., interest rate, unemployment rate and the price of a particular commodity) that are likely to influence observed prices of the asset are identified (e.g., using stepwise regression or a statistical clustering technique). Next, a prediction formula is generated (e.g., using a statistical regression technique or a neural network technique) based on historical values for the exogenous variables and the asset value. That formula is then calculated using an input set of observed values for the exogenous variables at a given point in time, so as to obtain a price estimate for the asset at that given point in time. Finally, a determination is made as to how similar or dissimilar the actual asset value is to the predicted value (e.g., using a difference or a ratio), and a direction in which the asset price will move is forecast based on the determined similarity measure. See, e.g., page 4 line 17 through page 13 line 25 and Figure 1 of the Specification.

By appropriately selecting the exogenous variables in the technique of the present invention, desired components of historically observed asset price movements often can be separated out and used for price forecasting. See, e.g., page 4 lines 3-5 of the Specification. For example, by selecting exogenous variables that reflect only non-asset-specific, but otherwise fairly comprehensive, market information, the similarity measure generally can be constructed so as to provide a good indication of how the market has responded to changes in asset-specific information (e.g., news of a new product release). Based on this information, an investor may be able to determine whether the market has responded appropriately and, correspondingly, whether the asset appears to be over-valued or under-valued. See, e.g., page 4 lines 5-16 of the Specification.

Thus, independent claims 1, 31 and 32 are directed toward forecasting the direction in which the price of an asset will move. Initially, a group of exogenous variables that are likely to influence observed prices of the asset is identified. Historical data for values of such exogenous variables and historical data for the observed prices of the asset over a period of time are

processed to obtain a formula for calculating price estimates for the asset as a function of the exogenous variables. That formula is then calculated using an input set of observed values for the exogenous variables at a given point in time, so as to obtain a price estimate for the asset at such given point in time. Next, a similarity measure is determined by comparing the price estimate for the asset at the given point in time to the observed price for the asset at the same given point in time. Finally, a direction in which the observed price of the asset will move is forecast based on the determined similarity measure.

The foregoing combination of features is not disclosed or suggested by the applied art. In fact, Gatto does not disclose or suggest many of the features or limitations recited in the present claims. This is because Gatto is directed to an entirely different problem than is addressed by the present invention. See, e.g., page 4 of the present Office Action dated February 7, 2006, (the "Current Office Action"), in which even the Examiner acknowledges that Gatto uses an entirely different approach than that of the present invention.

As noted above, the present invention provides an indication as to whether a given asset price will move up or down. Generally speaking, this is accomplished by comparing an actually observed asset price to what would have been predicted based on a group of exogenous variables that are likely to influence the observed price of the asset.

Gatto, on the other hand, provides a computer-implemented tool that assists a user in evaluating the performances of security analysts and in determining an optimal combination of the analysts' estimates. See, e.g., Gatto's Abstract and column 8 lines 52-54 of Gatto's disclosure. The apparent goals of Gatto's tool are to help a user: (i) identify how certain factors pertaining to an estimate or to the analyst who made the estimate affect the accuracy of the estimate; and then (ii) manually assign corrections and weights based on that information, in order to produce a prediction model. The resulting model can then be used to combine future estimates to produce a composite (hopefully optimal) forecast.

In other words, Gatto is concerned with providing tools to assist in better combining forecasts related to an identified security. By comparison, as will become clear in the discussion below, the present invention primarily is concerned with how the market is pricing an asset and, in particular, focuses on the component of the asset's market price that results after separating out the influences caused by factors that are reflected by certain selected exogenous variables.

These general differences between the present invention and Gatto manifest themselves, for example, in the following specific distinctions.

First, the present claims recite the identification and use of “a group of exogenous variables that are likely to influence observed prices of an asset.” See, e.g., page 4 lines 19-20 of the Specification. Examples include macroeconomic variables, such as interest rate, unemployment rate, housing starts or currency exchange rate. See, e.g., page 5 lines 5-8 of the Specification and U.S. Patent 6,907,403 (the ‘403 patent), which is incorporated by reference in the present application.

The Examiner, citing column 19 lines 10-48 of Gatto, apparently asserts that Gatto’s analyst/estimate factors correspond to this feature of the invention. As described in Gatto, e.g., at column 19 lines 24-29, such factors include: accuracy, all-star rating, broker list, experience, estimate age, and other factors, attributes or performance metrics.

Rather than themselves actually being “likely to influence observed prices” of any assets, as presently recited, Gatto’s analyst/estimate factors only appear to relate to certain characteristics of estimates (e.g., their ages) or the analysts who have made them (e.g., previous accuracy, experience, recognition in the industry). Accordingly, contrary to the Examiner’s assertion, the present invention’s exogenous variables in fact are significantly different than the analyst/estimate factors used by Gatto.

Second, even if one were to attempt to read the presently recited term “exogenous variables” on Gatto’s factors identified above, as is asserted by the Examiner, many of the limitations of the present claims still would be neither disclosed nor suggested by Gatto.

For example, historical values for Gatto’s analyst/estimate factors are not processed in order to obtain a formula for calculating price estimates for an asset as a function of such factors (as in the present claims). Rather, as explained in column 19 of Gatto, Gatto’s analyst/estimate factors, as well as the N-scores and weights assigned to such factors, are simply selected by the user, in the user’s own discretion, in order to create a model that will be used to produce a (again, hopefully optimal) combination of the analysts’ forecasts.

The Examiner cites column 11 lines 10-52 of Gatto as purportedly disclosing the feature of processing historical values for Gatto’s analyst/estimate factors in order to obtain a formula for calculating price estimates for an asset as a function of such factors. However, that portion of Gatto instead merely describes an aspect of Gatto’s software tool that permits a user to toggle

back and forth between displays of historical stock data, analysts' estimates with respect to such stocks, and the prices that would have been predicted by user-specified models, all over the same selected period of time. As result, a user is able to visually compare historical data on the one hand against analyst and model estimates on the other. However, the cited portion of Gatto says nothing at all about processing historical data for Gatto's analyst/estimate factors in order to obtain a formula that is a function of such analyst/estimate factors.

Third, each of the present claims recites the feature of calculating the formula, which is a function of the exogenous variables and which has been obtained by processing historical data values of such exogenous variables, using an input set of observed values for the exogenous variables to obtain a price estimate for the asset. The Examiner cites column 11 line 62 through column 12 line 37 and column 24 lines 17-27 of Gatto as purportedly showing this feature of the invention. However, column 11 line 62 through column 12 line 37 appears merely to discuss Gatto's user interface for viewing historical data. Column 24 lines 17-27 appears merely to discuss the testing of a selected model by running it against historical data. Neither portion says anything at all (i) about a model having the characteristics mentioned above or (ii) about running a model using as inputs any of Gatto's analyst/estimate factors (which factors the Examiner asserts correspond to the present invention's exogenous variables).

Fourth, each of the present claims recites the determination of a similarity measure by comparing the price estimate calculated using the formula referenced above with an actually observed price for the asset. The portions of Gatto cited in the Current Office Action as allegedly showing this feature of the invention are as follows. Column 11 lines 45-52 generally discusses the selection and use of a model, together with visually comparing estimates from the model to a consensus estimate or other source. Column 12 lines 37-45 generally discusses the selection of a model and the use of such a model to create an enhanced composite estimate from individual analyst estimate data, as well as the evaluation of the selected model by comparing its results against those of selected analysts, consensus and other estimates. Column 26 lines 30-35 discusses testing a selected model against historical data and comparing its accuracy with that of a consensus forecast. Thus, none of these provisions mentions or even remotely suggests: (i) obtaining a price estimate using a formula as presently recited, or (ii) determining a similarity measure by comparing such a price estimate with an actually observed price for the asset. As to the latter feature, it is noted that even the Examiner only asserts (at the top of page 4 of the

Current Office Action) that Gatto allows the user to compare the results of the selected model to other estimates, rather than any actually observed price.

Fifth, each of the present claims recites that a direction in which the observed price of the asset will move is forecast based on the similarity measure, which has been determined as set forth above. In the Current Office Action, the Examiner cites column 18 lines 55-60 as showing this feature of the invention. However, that portion of Gatto only discusses comparing an enhanced composite estimate to a consensus estimate and therefore has nothing to do with the presently claimed similarity measure, which as noted above is based on a comparison of a particular price estimate (calculated using the formula referenced above) with an actually observed price for the asset.

As noted above, these significant specific differences between Gatto and the present claims resulting rectally from the fact that Gatto concerns an entirely different problem and employs an entirely different approach than the present invention. Both the general and specific differences between the present invention and Gatto require the conclusion that independent claims 1, 31 and 32 could not possibly have been obvious in view of Gatto.

Accordingly, independent claims 1, 31 and 32, together with their dependent claims, are believed to be allowable over the applied art.